

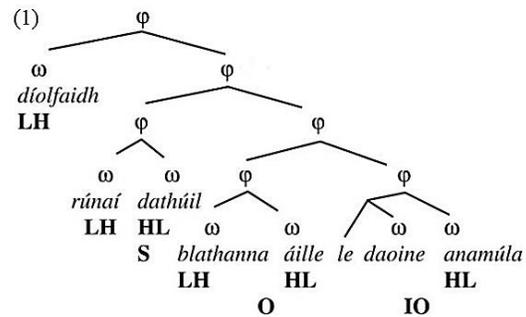
The phonetics of prominence of the word and phrase in three Irish dialects

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Background: Irish typically realizes both phrasal and word prominence on the same syllable: Word-stress is realized on the initial syllable of the prosodic word (ω), and phrasal pitch accents are realized on the stressed syllable of the left or right-most ω in a prosodic phrase (ϕ): Minimal ϕ s assign pitch accents to their right-most daughter, and non-minimal ϕ s assign pitch accents to their left-most daughter (Dalton & Ní Chasaide 2003, 2007; Elfner 2015; Windsor 2016). An exception to these rules is found in some Southern dialects of Irish (eg. in Cork and Waterford), which allow stress to be shifted to the second or third syllable of a ω if heavy (Green 1996; Gussmann 1997; Thrift 1997; Ó Sé 2008; Iosad 2013). The assignment of ϕ -prominence in these dialects, and the relationship to ω -prominence has not been previously studied.

Questions: What are the phonetic correlates of prominence at the ω and ϕ levels in Irish; how do those correlates interact with each other; and, do the correlates and alignments differ by dialect?

Methodology: Elfner's (2015) analysis of Galway Irish discovered that (as in 1) LH accents fall on the stressed syllable of the left-most ω of every non-minimal ϕ and that HL accents fall on the stressed syllable of the right-most ω in every minimal ϕ . In a subsequent study, Windsor (2016) found that the object noun of a transitive sentence, modified by a single adjective, was not in a position to receive any pitch accent (2a), but if a demonstrative was added, an HL accent was forced onto the object noun (2b):



- (2) a.
- | | | | | | |
|--|--------------|-------------|---|----|--|
| LH | LH | HL | | HL | |
| ['yam.sə nə 'ka:.li.ni 'ɣv.ɾ.ɬə lɛsʲ nə | ho:.ga:.ni | 'le.sku:.lə |] | | |
| dance.PST DEF girl.PL spirited with DEF | young.boy.PL | shy | | | |
| 'the spirited girls danced with the shy boys' | | | | | |
- b.
- | | | | | | |
|---|--------------|-------------|-------|----|----|
| LH | LH | HL | | HL | HL |
| ['yam.sə nə 'ka:.li.ni 'ɣv.ɾ.ɬə lɛsʲ nə | ho:.ga:.ni | 'le.sku:.lə | u:d] | | |
| dance.PST DEF girl.PL spirited with DEF | young.boy.PL | shy | INVIS | | |
| 'the spirited girls danced with yonder shy boys' | | | | | |

In this study, 40 target nouns with two or more syllables were elicited in object position both with and without a demonstrative. Elicitations were collected from native speakers in three regional dialects: Galway, Cork, and Waterford. Tokens were measured for pitch (Hz), amplitude (dB), and vowel length (ms). Tokens in pitch accent contexts (eg. 2b) were contrasted with those not in a pitch accent context (eg. 2a) to understand the correlates of phrasal prominence. Stressed syllables in tokens without pitch accents were contrasted with the adjacent syllables to understand the correlates of word prominence. Analyses were completed using logistic regression in R (2013).

Results: Our results show that phrasal pitch accents correlate with an interaction between Mean Hz and the Range of Hz across the syllable ($p=0.005$) in all three dialects. However, word-level prominence was found to differ between dialects, relying on the same correlates as ϕ -prominence in Galway Irish, and relying on Max Hz ($p=0.004$) and the range of dB across the syllable ($p=0.001$) in Cork and Waterford Irish. Further, while the Galway and Cork speakers rigidly aligned the ϕ -prominence with the main stressed syllable of the ω , the Waterford speaker showed more variable alignment strategies (*cf.* Dalton & Ní Chasaide 2007), allowing the pitch accent to precede the primary stressed syllable.

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